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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/074,228 | 02/14/2002 | Munehiro Morokuma | 7201 | 6202 |

7590 08/11/2004

SHLESINGER, ARKWRIGHT & GARVEY LLP
PATENT, TRADEMARK & COPYRIGHT LAW
3000 SOUTH EADS STREET
ARLINGTON, VA 22202

EXAMINER

BELL, BRUCE F

ART UNIT PAPER NUMBER

1746

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/074,228 | | MOROKUMA ET AL. | |
| | Examiner | | Art Unit | |
| | Bruce F. Bell | | 1746 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,9-11 and 14 is/are rejected.
- 7) ☒ Claim(s) 2-8,12,13 and 15-21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

The following references to the claims in the specification are requested to be removed and the subject matter from those claims, maybe inserted into the specification:

Page 4, line 6; Delete "As claimed in claim 1,".

Page 4, line 14; Delete ", as claimed in claim 2".

Page 4, line 18; Delete ", as claimed in claim 4".

Page 4, line 21; Delete ", as claimed in claim 6".

Page 5, line 2; Delete ", as claimed in claim 9".

Page 5, line 7; Delete "as claimed in one claims 1 to 8".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Tanaka et al (6348286).

Tanaka et al disclose an alkaline battery separator comprising a fiber sheet, wherein the fiber sheet can be made of polyester fibers. See abstract and col. 12, lines 61-67. The fiber sheet separator can be of a non-woven or woven or knitted fabric and is preferably formed of fibers having a fineness of 0.01 to 4 dtex to provide a suitable denseness for avoiding short circuiting and a permeability for gases generated. See col. 6, lines 4-19.

Tanaka et al anticipates applicants' instant claim 1 as set forth above.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 9-11 rejected under 35 U.S.C. 102(b) as being anticipated by Ue et al (5733661).

Ue et al disclose a solid electrolyte capacitor having the electrodes made of wire, rod, foil or plate form. See col. 4, lines 22-24. The electrolytic capacitor can be produced by the same method as for conventional electrolytic capacitors, except that a high permittivity composite oxide film is formed on a surface of a metal foil such as etched aluminum foil. A high purity aluminum foil is etched to enlarge the surface area thereof, before a high permittivity composite oxide film is formed on the etched surface. This aluminum foil is wound into a roll together with a separator and an aluminum cathode foil to obtain an internal capacitor element.

This element is impregnated with an electrolytic solution and then placed in an aluminum case, which is sealed to produce an electrolytic capacitor. See col. 6, lines 33-47. An organic semiconductor material of TCNQ salt is used as a solid electrolyte in the capacitor by infiltrating the thermally molten TCNQ into a rolled internal capacitor element. Once infiltrated into the capacitor structure, the electrolyte is solidified. See col. 6, lines 53-64 and Figure 1A.

Ue et al anticipates the applicant's instant invention as set forth in the instant claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ue et al (5733661) in combination with Tanaka et al (6348286).

Ue et al is as taught in the 35 USC 102 rejection above.

Ue et al does not teach the diameter of the fiber of 0.01 to 3 dtex.

Tanaka et al is as taught in the 35 USC 102 rejection above.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the instant invention was made because even though Ue et al does not teach the fiber diameter, Ue et al does teach the need for thinner dielectric materials which do not short circuit. Reduction of dielectric

materials normally means a reduction in the withstanding voltage, therefore one having ordinary skill in the art would have recognized that the thinner separator with smaller diameter fibers that is taught to reduce short circuiting in electrolytic devices, would recognize that these separators with a smaller diameter fiber could be used in electrolytic devices for the purpose of maintaining withstanding voltages at the higher levels with a smaller thickness dielectric or separator. Therefore, to utilize the separator of Tanaka et al as the dielectric in the Ue et al device to stop the reduction of the withstanding voltage, would be within the ability of the person having ordinary skill in the art.

Allowable Subject Matter

8. Claims 2-8 and 12, 13, 15-21 are allowable over the prior art of record.
9. Claims 2-8, 12, 13, 15-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
10. The following is a statement of reasons for the indication of allowable subject matter:


The prior art of record fails to teach and/or suggest a separator which contains a polyester of the polyethyleneterephthalate family and which further may contain a carboxyalkoxybenzenesulfonic acid .

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 571-272-1296. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BFB
August 9, 2004


Bruce F. Bell
Primary Examiner
Art Unit 1746